

R E M A R K S

In the Office Action dated January 12, 2009, editorial changes were suggested in claim 1, which have been made.

Claims 41-45, 47-50, 53 and 80 were rejected under Section 112, first paragraph as failing to comply with the enablement requirement because the Examiner stated the specification does not appear to describe how to automatically electronically estimate a contribution of an EKG signal of the subject to the raw signal nor how to automatically electronically estimate a contribution of an EMG signal of a subject to the raw signal, such that a person of ordinary skill in the relevant technology could accomplish those steps.

Claims 41-45, 47-50, 53 and 80 also were rejected under Section 112, first paragraph as failing to comply with the written description requirement, for the same reason as noted above. Additionally, the Examiner stated the specification does not appear to disclose "filtering said EMG signal out of said raw signal only within said frequency range of said window." Applicants note with appreciation the telephone interview courteously afforded the undersigned representative of the Applicants on April 7, 2009, wherein these rejections were discussed. With regard to the enablement rejection, the undersigned representative of the Applicants stated that the estimation of the contribution of the EKG signal to the raw signal is described, for example, in paragraph [0036] of the published application, which refers to analyzing the EKG signal 26 within a frequency interval f_{EKG} , as indicated in Figure 5 of the application, while at the same time estimating the frequency spectrum of the EMG signal 24. By having a general knowledge of the expected shape (waveform) of the EKG signal, and by knowing that the EMG signal is generally symmetric around a

center frequency, the general contributions of the EKG signal and the EMG signal can be estimated, as indicated in Figure 5.

The Examiner stated that the rejections based on lack of enablement and non-compliance with the written description requirement were based on the Examiner's interpretation of the current language of claim 41 as requiring that the entirety of the contribution of the EKG signal and the EMG signal to the raw signal be estimated, whereas the Examiner believes the specification describes estimating only certain portions or attributes of that overall contribution. It was therefore agreed in the telephone interview that the enablement and written description rejections could be overcome by clarifying in the language of claim 41 that it is attributes of the aforementioned respective contributions of the EKG signal and the EMG signal to the raw signal that are estimated. Claim 41 has accordingly been amended in this manner, and the aforementioned rejections are respectfully submitted to be overcome.

With regard to the written description rejection based on the "filtering" step, the undersigned representative of the Applicants explained that this step is intended to mean that it is the raw signal that is actually being filtered, and the EMG signal results as a signal component that is filtered out of the raw signal. It was agreed that clarifying the language of claim 41 consistently with these statements made in the telephone interview would overcome this portion of the written description rejection. Claim 41 accordingly has been amended as discussed in the telephone interview.

Claim 41 and all claims depending therefrom are therefore submitted to be in full compliance with all provisions of Section 112, first paragraph.

Additionally, claims 41, 42 and 44 were rejected under 35 U.S.C. §102(b) as being anticipated by Stein et al. This rejection also was discussed in the telephone interview.

In the telephone interview, Applicants' representative stated that, as shown in Figure 4 of the Stein et al reference, two separate electrodes 404 and 402 are shown, from which the EMG signal and the ECG signal are separately obtained. This is different from the subject matter of claim 41, wherein both signals are present in the raw signal, and the goal of the method of claim 41 is to "extract" the EMG signal from the raw signal.

In response, the Examiner stated that despite the signal obtained from electrode 404 in Stein et al as being designated as an EMG signal, the Examiner considers that signal to also contain an ECG component, and therefore the separate showing of an ECG signal on electrode 402 in Figure 4 does not preclude that interpretation.

In response, the undersigned representative of the Applicants stated that even if this were the case, the ECG signal in Figure 4 of Stein et al is not used to filter the signal designated as the EMG signal (if that signal is, in fact, considered to be the same as the "raw signal" in claim 41), but is instead used to perform ECG blanking within a time window, which has nothing to do with filtering the EMG signal (or the "raw signal") only within a frequency range determined by a window as set forth in claim 41.

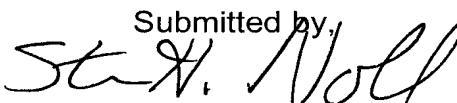
In response, the Examiner stated he would not believe the current language of claim 41 necessarily required filtering the raw signal itself, and moreover did not necessarily require filtering any signal within the frequency domain.

Claim 41 has been amended to clarify these points and, for the reasons noted above, is now submitted to clearly be distinguishable from the subject matter disclosed in the Stein et al reference. The Stein et al reference, therefore, does not disclose all of the elements of any of claims 41, 42 or 44, and thus does not anticipate any of those claims.

Claims 48-50 were rejected under 35 U.S.C. §103(a) as being unpatentable over Stein et al in view of Sinderby et al. The above arguments concerning the Stein et al reference are equally applicable to this rejection. Even if the Stein et al reference were modified in accordance with the teachings of Sinderby noted by the Examiner, the subject matter of claims 48-50 still would not result, in view of the aforementioned differences between the subject matter of claim 41 and the disclosure of the Stein et al reference.

All claims of the application are therefore submitted to be in condition for allowance, and early reconsideration of the application is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required, or to credit any overpayment to account No. 501519.

Submitted by,
 (Reg. 28,982)

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